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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,446	12/18/2002	Donald S. Hare	0175-0285P	9413
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BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER SCHILLING, RICHARD L				
ART UNIT PAPER NUMBER				
1752				

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,446

Applicant(s)

Hate et al

Examiner

R L Schilling

Group Art Unit

1752

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-22 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-22 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 3-29-02
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Art Unit 1752

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of European Patent Publication 31,085 or DeVries et al. '591 both further in view of Coleman and Agler et al. The European patent publication (see particularly page 2, lines 21-43; page 3, lines 6-45) and DeVries et al. '591 (see particularly column 2, lines 6-50; column 3, lines 1-26; column 3, lines 44-66; column 5, lines 3-8; column 6,

lines 17-40; column 8, lines 58-66; Figure 1) disclose heat transfer elements comprising supports, sublimable dye inks or patterns on the support materials and thermally transferable polymer coatings, including acrylic compositions over the sublimable dye patterns. The dye patterns are transferred to fabric receptors by laminating the heat transferable polymer layers onto the fabric receptors and applying heat and pressure to transfer the heat transferable polymer layers and sublimable dyes into the fabric receptors. DeVries et al. discloses that a hand iron may be used. DeVries et al. also discloses that the support material should be impervious to the heat transferable polymer layers or meltable layers which may optionally be on the support materials. DeVries et al. and the European patent publication do not set forth barrier layers on the surface of their supports which do not melt during transfer. However, Coleman (see particularly column 4, lines 5-26) discloses heat transfer materials comprising supports, ink designs and heat transferable polymer layers over the ink designs for transfer to receptors wherein it is taught that the supports may be coated with barrier layers to seal the underlying paper supports and allow release of the heat release polymer layers and prevent the heat release layers from penetrating the substrates. Agler et al. (see particularly column 2, lines 45-57; column 3, lines

1-65; column 6, lines 15-22) also discloses transfer materials comprising substrates with heat release layers comprising meltable polymeric materials, including acrylics, which are transferred to fabric materials using heat and pressure after imaging with various imaging materials. Agler et al. discloses that the particular compositions of instant claim 14 may be used as the heat transferable polymeric composition for transfer into fabric supports. Agler et al. specifically teaches the use of barrier layers between the substrates and heat transferable polymer layers to improve the transfer of the heat transferable polymer layers into the fabric material, particularly during hand ironing, and to prevent the heat transferable polymer layer or imaging material from adhering to the support. In view of the teachings in Agler et al. and Coleman of using barrier layers on support materials to improve transfer of heat release polymer layers to fabric receptors and to prevent imaging material or heat release polymeric transfer material from adhering to supports during transfer, it would be obvious to one skilled in the art to improve the heat transfer materials of the European patent publication and DeVries et al. by employing barrier layers, such as those in Coleman and Agler et al., on the support materials of the European patent publication and DeVries et al. in order to improve the transfer properties and prevent release

material and imaging material from adhering to the supports in the European patent publication and DeVries et al. It would be obvious to one skilled in the art to use these barrier materials in the European patent publication and DeVries et al. because the European patent publication and DeVries et al. desire release from and non-penetration of imaging materials into their support materials. It would also be obvious to one skilled in the art to use the heat transferable polymer compositions comprising acrylic emulsions of Agler et al. as the called for heat transferable polymer layers in the European patent publication and DeVries et al. which also may be acrylic compositions with plasticizers used to transfer patterns into fabric materials.

2. Claims 1-12 and 18-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DeVries et al. '591. DeVries et al. (see particularly column 2, lines 6-50; column 3, lines 1-26; column 3, lines 44-66; column 5, lines 3-8; column 6, lines 17-40; column 8, lines 58-66; Figure 1) discloses transfer materials comprising supports, release layers, designs of sublimable dyes and heat transferable polymeric layers which transfer to fabric receptors along with the designs. The release layers in DeVries et al. are printed with ink so that the ink is not printed on a support. The release layers in DeVries et al.

are barriers to the ink being printed on the supports and correspond to barrier layers encompassed by the description of barrier layers set forth in the instant claims.

3. Claim 22 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis for the term "the polyester layer" in claim 22 since the polyester material is not specified as being a layer.

4. Claims 1-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The intended scope of the term "polyester layer" or the term "polyester material" as used in the instant claims is indefinite. It is indefinite as to whether or not the polyester of the instant claims is intended to include a polyester made from condensation reactions of diols and diacids as commonly referred to in the art. Page 22, lines 18-28, and page 23, lines 25-30 of the specification refer to polyester layers not containing traditional polyester materials but rather materials made from ethylenically unsaturated monomers such as acrylics. Acrylic acid polymers listed in the specification as polyesters do not necessarily contain any ester groups. The

binders A-G used in the working Examples of the specification are acrylic dispersions including polyolefins and acrylic acid polymers without ester groups. None of the polymers A-G for the polyester layers of the working Examples are condensation polyesters or even polyvinyl esters or ester containing acrylate polymers. Therefore, the intended scope of the term "polyester" as used to describe layers of the transfer materials of the instant claims is indefinite.

5. The prior art submitted by applicants has been considered. DeVries et al. '644 is cited of interest in the art as being substantially cumulative to DeVries et al. '591. Williams et al. and Kronzer are cited of interest in the art as disclosing thermal transfer elements with layers on substrates for improving the release of thermally transferable polymeric layers when transferring into fabric materials. Donenfeld is cited of interest in the art as disclosing heat transferable materials comprising sublimable dyes on supports with release layers which are either heat transferable or non-transferable.

6. Any inquiry concerning this communication should be directed to Mr. Schilling at telephone number (571) 272-1335.

RLSchilling:cdc

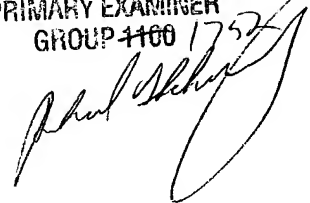
Serial No. 10/089,446

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April 1, 2004

RICHARD L. SCHILLING
PRIMARY EXAMINER
GROUP 4100 1752

A handwritten signature in black ink, appearing to read "Richard L. Schilling", is written over the printed text of the stamp.